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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/404,705

09/23/1999

MUNEHIRO IKEDA

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12/18/2002

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EXAMINER

DUONG, TAI V

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/404,705

Applicant(s)

IKEDA, MUNEHIO

Examiner

TAI DUONG

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recited feature "at least one of said first and second signal lines has a cut-out portion having a length equal to a length along which said first and/or second signal lines cannot be adjacent to said pixel electrode by a thin film transistor formed at one side of said pixel electrode " of claim 23 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the recited limitation "at least one of said first and second signal lines has a cut-out portion having a length equal to a length along which said first and/or second signal lines cannot be adjacent to said pixel electrode by a thin film transistor formed at one side of said pixel electrode " of claim 23.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 5, 9 and 13 are inconsistent with the specification and the drawings because the specification and Figs. 6, 9, 11 and 12 disclose the first and second spaces  $d$  are equal when the space  $d$  is the distance between the first (11i) or second signal line (11j) and the pixel edge section 13a, not between the pixel electrode 13 and the signal lines (Fig. 2). It is noted that dependent claims 4, 8, 12 and 16 are consistent with the specification and Fig. 10 which discloses that the pixel electrode 13 is formed on an insulating layer 36 while the pixel edge section 13a and the signal lines (11i, 11j) are formed on the gate insulating film 32. In claims 3, 4, 7, 8, 11, 12, 15, 16, 18, 21, 24 and 27, the phrase "formed in a layer" is confusing because Fig. 8 shows the first (11i) and second signal line (11j), the pixel electrode 13 and the pixel edge section 13a being formed on the gate insulating film 32 while Fig. 10 shows the pixel electrode 13 being formed on an insulating layer 36. In claims 4, 8, 12 and 16, it is unclear to which layers of Figs. 8 and 10 the recited "said first and second layers" refer.

Claims 17, 20, 23 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted step is: the step of forming the pixel edge section 13a. Without this step, the recited functional limitation "a first space between said pixel electrode and said first signal line is equal to a second space between said pixel electrode and said second signal line" cannot be achieved. Claim 26 is confusing because the structure of the device cited in preamble does not correspond to that recited in step (c) of the claim. Claims 18, 21, 24 and 27 are inconsistent with the specification and the drawings. According to the specification, Figs. 13 and 14, the

Art Unit: 2871

step of forming the pixel electrode (150, 220) is after the step of forming the first and second signal lines (140, 140a). Nowhere in the specification or the drawing does it disclose that "the pixel electrode is formed between said first and second signal lines in a common layer in said step (d)".

The remaining claims are also rejected since they depend on the indefinite claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 17, 20 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Sukegawa et al.

In this rejection, the above claims are interpreted in light of the specification and the drawings. That is, the first and second spaces d are equal when the space d is the distance between the first (11i) or second signal line (11j) and the pixel edge section 13a; the pixel electrode 13 is formed on a layer on which the first (11i) and second signal line (11j) are also formed. Note Figs. 8 and 9 which identically disclose the claimed LCD device comprising the first and second spaces L0 being equal when the space L0 is the distance between the first (left 18) or second signal line (right 18) and the pixel edge section 18a'. Also, the pixel electrode 19 is formed on a layer 14 on which the first and second signal lines are also formed. Note the projection portion 17d

Art Unit: 2871

extending toward the pixel electrode 19. As to steps (a), (b) and (c) of claims 17, 20 and 26, note Fig. 5. Note the insulating film 30 of Fig. 6 for step (e), and the pixel electrode 19 of Fig. 9 for step (d). It is noted that the structure of the device cited in preamble of method claim 26 has not been given weight because this structure is not related to the body of the claim. Also, note method claims 20 and 26 are similar except for their preamble.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sukegawa et al in view of Yao et al.

The only difference between the above-mentioned device of Sukegawa and that of the instant claims is the pixel electrode 19 being formed on an insulating layer above the signal lines. Yao et al disclose that it was known to form the pixel electrode on an insulating layer above the signal lines for reducing the driving voltage (col. 2, lines 7-10). Thus, it would have been obvious to a person of ordinary skill in the art to form the pixel electrode on an insulating layer above the signal lines in the device of Sukegawa for reducing the driving voltage, as disclosed by Yao et al.

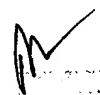
Claims 9-16 and 23-25 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Art Unit: 2871

The following is a statement of reasons for the indication of allowable subject matter:

Claims 9-16 are allowable over the prior art of record because none of the prior art of record discloses or suggests a LCD device and method of fabricating a LCD wherein the LCD comprises the signal lines having a particular structure recited in paragraph (d) of claim 9, paragraph (c) of claim 13 or paragraph (c) of claim 23.

Any inquiry concerning this communication should be directed to TAI DUONG at telephone number 703 308-4873.

  
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TVD

12/02